Faro de las Cabezas de San Juan
(Cabo San Juan Light)
Cabezas de San Juan
Cabezas
Fajardo
Puerto Rico

HAER No. PR-18

PHOTOGRAPHS

WRITTEN HISTORIC AND DESCRIPTIVE DATA

Historic American Engineering Record
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HISTORIC AMERICAN ENGINEERING RECORD

Faro de las Cabezas de San Juan
(Cabo San Juan Light)

PR-18

Location: At the highest point of Cape San Juan, Fajardo vicinity, northeastern Puerto Rico
Position: 18° 23' N - 65° 37.1' W

Date of Erection: 1881-82

Present Owner: U.S. Department of Commerce
U.S. Coast Guard

Original Owner: Central Lighthouse Commission
Colonial Public Works Office
Harbor and Port Section
Government of Spain

Present Use: Lighthouse

Significance: In 1782, one hundred years before the final construction of Cabo San Juan Lighthouse, Fray Inigo Abbad y Lasierra, who wrote the first formal history of Puerto Rico stated that:

"The mountain peaks of Loquillo and Laivonito ... can be seen from a far off distance in the sea, and through them sailors recognize Cabezas de San Juan, the reference point of those who regularly navigate by these islands [to direct their course] towards the Honduras and Mexico Gulf."

His "message" began to materialize by mid-1850 when feasibility plans were drawn to build a lighthouse in Cabo San Juan. The location was carefully surveyed and studied in October 1856, concurring with today's light location. In 1876 the first plans were commissioned and construction began in early 1877. The original 1876 plans have not been found yet, but subsequent references --particularly in 1881— clearly indicate that the earliest project was dropped. The reasons are unknown but it was possible that budgetary problems might have been the cause. There are further indications that by 1880 another plan was considered and construction carried out. This second plan apparently served as the basis for the last attempt, 1881, upon which the actual structure was built.

In March 1882, one hundred years after Abbad y Lasierra's remarks, the builder delivered the construction to the Colonial Governor of Puerto Rico. On 2 May 1882 it was officially lighted. The original white building with dark gray trimmings, green doors and windows, became the second lighthouse to be built according to the master plan ... and remained almost unaltered for another hundred years.

From seaward, the lighthouse is projected against the distant mountains of Fajardo and the mountain of Loquillo or Luquillo, according to Abbad y Lasierra, called "Turcidi" by the Island's blacks meaning "always surrounded by clouds." The magnificent structure sits on top of a rocky hill that is barely covered by a light crust of clay. At foot hill, swamps and marshes isolate the lighthouse from mainland. At a further distance, a phosphorescent lagoon is encircled by mangrove trees. Thus forming the lighthouse south boundary. To the north is the ocean; to the east the San Juan Passage leading to the Vieques Sound. A little further east are Icacos, Wolf's, and Devil's Keys --names that indicate treacherous waters--; further east is Culebra Island; a little further, the light from Culebritas; and lost in the blueish-gray horizon, the shadow of remote Saint Thomas. South east Vieques Island and Point Mulas Light are found.

The structure, 30 x 12.5 x 6.6 mts. was built for one 1st and 3rd class keeper. A portico, 5 x 1.4 x 5 mts., with four rectangular openings acting as windows, leads to the vestibule. The main entrance has an elaborate hood molding with the inscription "1880." The original vestibule was 5.15 x 3.7 x 5 mts. At both sides, it opened into the keepers' quarters. Facing the main entrance a 4 x 2 mts. corridor led to the 8 step stairway into the tower which is partially built into the north facade. At the end of this corridor a door to the east opened into the 5.7 x 5.15 x 4.5 mts. engineer's room. Another opened to the west to an identical storeroom. Both rooms had one window to the north facade and one window to the vestibule. The storeroom connected through a descending clockwise winding brick stairway to the oilroom which is a circular vaulted room underneath the tower (3.2 mts. in diameter

and 2.4 mts. at the highest point of the vault). A ventilation aperture in the 1.3 mt. thick brick wall opens to the north facade of the tower and two small glass-paned windows open to the east and west of the tower.

East of the vestibule was located a 5.2 x 5.15 x 4.5 mts. living room. It had a window to the south facade through the 75 cms. thick brick main structural walls. The living room opened to a sleeping room 5.3 x 3.45 x 4.5 mts. which had two windows, one facing south and the other west. From the living room, a corridor, 4.3 x 1.2 x 4.5 mts. led on the east to another 5.3 x 3.45 x 4.5 mts. dormitory and a 5.3 x 3.45 x 4.5 mts. kitchen-dining area. Both had windows to the east and the kitchen another to the north. The bathroom was at the end of the corridor. On the west section of the structure an identical space arrangement was found.

The 4.5 mts. (od) cylindrical tower is 13.35 mts. to the top of the brick and stone circular lantern. An elaborate and richly decorated cast-iron stairway leads to the lantern. The tower has 3.2 mts. internal diameter and opens to the north through a large window opposite the tower's double wooden door opening to the roof. The lantern is a cast-iron circular lantern. A circular corridor separates the cast-iron lantern from the external brick and stone wall.

The original 3rd order lantern (in cast-iron, copper, and glass) was severely damaged by the 1932 hurricane. The original illuminating apparatus was apparently changed in the early 1900's. It is known, though, that the original light characteristics were not changed until after 1898: it was a 3rd order light with 18 miles range and showed a fixed white light with red flashes every 3 minutes. A 1902 description of the apparatus states that it was a lenticular, 1881, Sautter, Lemonnier & Cie. 3rd order fixed white light varied by red flashes, 1 mt. in diameter lens. It fully revolved every 9 minutes. It had 5 panels in stationary section and 6 panels in the central drum of which three produced the red flashes. In each panel of the central drum there were 7 annular rings including a bull's eye. The lens had 11 prisms on each

panel above the central drum and 4 below. The flashes were produced by the revolving central drum. The revolving mechanism was mounted on a chariot activated by a clock work. The clock cord passed over 2 sheaves to a drop tube in the east side of tower. The cord had a 254 lb. weight.

The evidence indicates this lens was removed in 1916 and replaced by a 1881 lenticular Barbier & Bernard, Reiver & Cie. 4th order, 50 cms. in diameter, flashing white lens. It had 4 panels, of which two were flashing. Each panel of the central drum had 5 annular rings. Four prisms were located on each panel above the central drum and 2 below. The original chariot system was apparently replaced by a ball system. The clock system was left in place.

This lens, the lantern, and possibly the clock system were damaged, or totally destroyed, by the hurricane. A new Lens was installed: a U.S. Westinghouse four-way revolving beacon with four flashing panels 1 mt. in diameter. The lamp is enclosed in a spherical dioptic lens. This is the light apparatus which today shows F. W 15s. with a 26 mile range, the largest in the Island.

The structure went through several alterations. The brick and stone balustrade that surrounded the lantern was replaced, possibly in 1932, by an iron one. The original floor plan was redone, possibly in the 1940's or early 1950's. Two of the bedrooms were transformed into bathrooms. The east and west vestibule walls were torn down and replaced by reinforced concrete beams; the north walls of both old living rooms were also torn down and replaced by concrete beams. Thus, this allowed for the reduction of the old engineer's room and storeroom from which the new kitchens were built.

Nevertheless, the 1880-1881 firewood beams and lattice which formed the old brick roof were totally left intact. The ausubo beams (4" x 9") form a lovely rectangular pattern with the crossing ausubo lattice (2" x 3"). These keep in place 6 superimposed layers of brick (2" x 5 3/4 " x 11 1/2") which form a massive (15") roof.

Futhermore, most of the interior woodwork , the gray and white Genoa marble slabs, and the elaborate cast-iron tower stairway are in place. The structure reveals that special attention was given to its harmonious decorative elements: the upper middle section of the portico is adorned by a simple molding that is at the same height of the main entrance's heavy and elaborate hood moulding. The portico, being higher than the dwelling itself, but showing the same heavy and elaborate cornice, provides a formal presence to the facade that is enhanced by the parapet in the portico's roof built in a balustrade fashion. This parapet is not repeated anywhere in the structure except in the old parapet of the lantern which showed (ca. 1898 photo) a brick and mortar balustrade.

This same balustrade rested on simple concave brackets which are the reverse shape of the portico's molding. All these elements give the lighthouse a certain "castle" appearance, a peculiar counterbalance to the rest of the neo-classic structure where the sole decoration is the heavy cornice. The tower has an embracing rectangular cornice that projects itself, from its own center, to the outside in a convex shape.

Cabo San Juan is the second oldest lighthouse on the Island and so far the best structurally preserved. It formed the crucually important most north eastern light angle in the north and eastern light belts guiding transportation into the Vieques and Culebra Passages to the Carribean and Atlantic Ocean.

Transmitted by:

Kevin Murphy, Historian HAER, August 1979; from the National Register Nomination prepared by Dr. Benjamin Nistal-Moret, August 1979.